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TRANSMITTAL FORM (to be used for all correspondence after initial filing)	Application Number	10/810,452	
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	First Named Inventor	Sehat Sutardja	
	Art Unit	2838	
	Examiner Name	Bao Q. Vu	
Total Number of Pages in This Submission		Attorney Docket Number	MP0467

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SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT			
Firm Name	Harness, Dickey & Pierce, P.L.C.		
Signature			
Printed name	Michael D. Wiggins		
Date	September 22, 2008	Reg. No.	34,754

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EM 184 988 725 US



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.: 10/810,452
Filing Date: 03/26/2004
Applicant: Sehat Sutardja
Group Art Unit: 2838
Examiner: Bao Q. Vu
Title: VOLTAGE REGULATOR
Attorney Docket: MP0467

BRIEF IN REPLY TO THE EXAMINER'S ANSWER

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This reply brief is in response to the Examiner's Answer mailed July 21, 2008, in the Appeal from the decision of the Patent Examiner dated October 19, 2007, rejecting Claims 1, 4-11 and 14-29, which are reproduced as an Appendix to this Appeal Brief.

REPLY ARGUMENTS

With respect to Claim 1, both Qian and Lu fail to show, teach or suggest a coupled inductor having first and second windings, wherein the first winding and the second winding have a coefficient of coupling that is greater than or equal to 0.99. Further, the Qian reference teaches away from using a tightly coupled inductor and instead addresses the situation where the coupled inductors have a significant leakage inductance (represented by L_k) that causes high voltage spikes across the switches. The Examiner admits that Lu does not address this issue.

As shown in prior art FIG. 2 of Qian, the voltage swing that occurs as a result of the leakage inductance L_k appears to support the idea that while the inductors of Qian may be coupled, they are not tightly coupled in a manner as claimed. Furthermore, the switch S1 in prior art FIG. 2 of Qian must be able to withstand 160% of the input voltage rather than merely the input voltage as in Applicant's voltage regulator. The circuit in FIG. 4 of Qian uses all of the elements of the prior art circuit of FIG. 2 – including the coupled inductors with leakage inductance L_k . Therefore the description of FIG. 2 is equally applicable to FIG. 4. There is no discussion in Qian that the coupled inductors in FIG. 4 are different than those in the prior art circuit of FIG. 2.

Accordingly, the entire purpose of the improvement of Qian is to add the additional components to the prior art circuit of FIG. 2 to compensate for the leakage inductance L_k and to handle the voltage spikes that arise in the prior art circuit of FIG. 2. As described above, Qian is directed to solving problems associated with coupled inductors having significant leakage inductance and thus teaches away from the use of coupled inductors with the claimed coefficient of coupling.

In response, the Examiner maintains that “one of ordinary skill in the art would also know that Qian at the time of the invention could not achieve perfect coupling so the circuit of figure 4 was used to compensate for the leakage inductance and therefore the circuit S3 and Cr was added to cure this problem,” and therefore “the circuit of S3 and Cr would not be needed.” (See Page 11, Lines 7-12 of the Examiner's Answer). In other words, the Examiner appears to be alleging that one skilled in the art would

modify Qian with the teachings of Lu instead of providing the improvements that the Qian reference fairly teaches.

Here again, Lu appears to be absent of any teaching or suggestion of addressing the problem that Qian is directed to, and Qian already provides a solution in the form of the additional structure discussed above. Accordingly, Applicant again respectfully submits that one skilled in the art presented with Qian, which already solves the problem of the leakage inductance, would have no motivation whatsoever to look to the teachings of Lu for the alleged alternate solution.

CONCLUSION

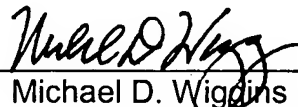
For the reasons presented above, the rejections of the claims are not properly founded and should be reversed.

Respectfully submitted,

HARNESS, DICKEY & PIERCE, P.L.C.

Date: September 22, 2008

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